

(PCT Article 36 and Rule 70)

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2005/000315

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following \_\_\_\_\_ which is the language of a translation furnished for the purposes of:

- ☐ international search (Rule 12.3 and 23.1(b))  
☐ publication of the international application (Rule 12.4)  
☐ international preliminary examination (Rule 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):

☐ the international application as originally filed/furnished

☒ the description:

pages 1, 4, 11, 13-16, 18-21, 23, 24, 27-30, 34 as originally filed/furnished

pages\* 10, 12, 25, 26 received by this Authority on 14.11.2005

pages\* 2, 3, 3/1, 3/2, 5, 6, 7, 7/1, 8, 8/1, 9, 9  
/1, 17, 22, 31, 31/1, 32, 33, 33/1 received by this Authority on 24.03.2006

☒ the claims:

nos. 2, 3, 4, 5, 6, 7, 12, 13, 14 as originally filed/furnished

nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19

nos.\* 1, 11, 15, 16, 17, 18 received by this Authority on 24.03.2006

nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☒ the drawings:

sheets Fig. 1-16 as originally filed/furnished

sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☒ The amendments have resulted in the cancellation of:

☐ the description, pages \_\_\_\_\_

☒ the claims, nos. 8, 9, 10

☐ the drawings, sheets/figs \_\_\_\_\_

☐ the sequence listing (specify): \_\_\_\_\_

☐ any table(s) related to sequence listing (specify): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages \_\_\_\_\_

☐ the claims, nos. \_\_\_\_\_

☐ the drawings, sheets/figs \_\_\_\_\_

☐ the sequence listing (specify): \_\_\_\_\_

☐ any table(s) related to sequence listing (specify): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	1-7, 11-18	YES
	Claims		NO
Inventive step (IS)	Claims	11-14	YES
	Claims	1-7, 15-18	NO
Industrial applicability (IA)	Claims	1-7, 11-18	YES
	Claims		NO
2. Citations and explanations (Rule 70.7)			
<p>Document 1: JP 9-33215 A (Matsushita Electric Industrial Co., Ltd.), 7 February 1997, entire text; all drawings &amp; US 6081619 A &amp; EP 755034 A1</p> <p>Document 2: JP 6-251159 A (Nippon Telegraph and Telephone Corporation), 9 September 1994, entire text; all drawings (Family: none)</p> <p>Document 3: JP 6-96212 A (Nippon Telegraph and Telephone Corporation), 8 April 1994, paragraphs [0002] to [0004], [0017] and [0032]; [fig. 2] (Family: none)</p> <p>Document 4: JP 10-13832 A (Nippon Telegraph and Telephone Corporation), 16 January 1998, entire text; all drawings (Family: none)</p> <p>Document 5: JP 2002-182685 A (Sony Corporation), 26 June 2002, entire text; all drawings (Family: none)</p> <p>Document 6: JP 2001-304973 A (Denso Corporation), 31 October 2001, paragraph [0002] &amp; US 2001/35559 A1</p> <p>Document 7: JP 55573 A (Matsushita Electric Industrial Co., Ltd.), 3 March 1995, paragraph [0032] (Family: none)</p> <p>Document 8: JP 2766820 B2 (Seiko Precision Corporation),</p>			

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10 April 1998, paragraphs [0004] and [0010]

(Family: none)

Document 9: JP 2003-30240 A (NTT Data Corporation), 31

January 2003, entire text; all drawings

(Family: none)

Claims 1 to 3

The invention set forth in claims 1 to 3 does not involve an inventive step in the light of documents 1, 2, 3, 4 and 5.

It would be easy for a person skilled in the art to apply the feature set forth in document 2, wherein a plurality of movement patterns are acquired by learning, the feature set forth in document 3, wherein the attributes of a plurality of animal bodies are recognized, and the feature set forth in documents 4 and 5, wherein characteristic patterns are extracted from an object to be recognized, the likelihood is calculated based on said characteristic pattern, and recognition is carried out based on said likelihood, to the device set forth in document 1, which carries out pattern recognition by detecting a movement signal using an infrared sensor.

Claim 4

The invention set forth in claim 4 does not involve an inventive step in the light of documents 1, 2, 3, 4, and 5 and document 6 (paragraph [0002]). It would be easy for a person skilled in the art to conceive of applying the heat-type infrared light sensor set forth in document 6 to the device set forth in document 1 which carries out pattern recognition by detecting a movement signal using

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an infrared array sensor.

#### Claim 5

The invention set forth in claim 5 does not involve an inventive step in the light of documents 1, 2, 3, 4, and 5 and document 7 (paragraph [0032]). It would be easy for a person skilled in the art to apply the quantum infrared sensor set forth in document 7 to the device set forth in document 1, which carries out pattern recognition by detecting movement signals using an infrared array sensor.

#### Claim 6

The invention set forth in claim 6 does not involve an inventive step in the light of documents 1, 2, 3, 4 and 5 and document 8 (paragraph [0004]). It would be easy for a person skilled in the art to apply the pyroelectric infrared sensor set forth in document 8 to the device set forth in document 1, which carries out pattern recognition by detecting movement signals using an infrared array sensor.

#### Claim 7

The invention set forth in claim 7 does not involve an inventive step in the light of documents 1, 2, 3, 4, 5, 6, 7 and 8. Document 2 sets forth a recognition device using an imbedded Markov model.

#### Claims 11 to 14

The feature wherein characteristic quantity data contains first characteristic quantity data comprising the frame unit spectrum of detection results of a heat

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radiation detecting means, and second characteristic quantity data comprising average amplitude values, is not disclosed in any of documents 1 to 9, and would not be obvious to a person skilled in the art.

## Claim 15

The invention set forth in claim 15 does not involve an inventive step in the light of documents 1, 2, 3, 4, 5, 6, 7 and 8 and document 9 (entire text; all drawings). It would be easy for a person skilled in the art to apply the device set forth in document 9, wherein coordinate values transformed to three dimensions or below are plotted and displayed on data having four or more dimensions, to the device set forth in document 1, which carries out pattern recognition by detecting movement signals using an infrared array sensor.

## Claims 16 and 17

The invention set forth in claims 16 and 17 does not involve an inventive step in the light of documents 1, 2, 3, 4 and 5. It would be easy for a person skilled in the art to apply the feature set forth in document 2, wherein a plurality of movement patterns are acquired by learning, the feature set forth in document 3, wherein the attributes of a plurality of animal bodies are recognized, and the feature set forth in documents 4 and 5, wherein characteristic patterns are extracted from an object to be recognized, the likelihood is calculated based on said characteristic pattern, and recognition is carried out based on said likelihood, to the device set forth in document 1, which carries out pattern recognition by detecting a movement signal using an

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infrared sensor.

## Claim 18

The invention set forth in claim 18 does not involve an inventive step in the light of documents 1, 2, 3, 4 and 5 and document 8 (paragraph [0010]). It would be easy for a person skilled in the art to apply the reporting means set forth in document 5 to the device set forth in document 1, which carries out pattern recognition by detecting movement signals using an infrared array sensor.